SOLID WASTE AUTHORITY

YOUR PARTNER FOR
SOLID WASTE SOLUTIONS

September 15, 2010

Mr. Scott M. Sheplak, P.E.
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Subject: Solid Waste Authority of Palm Beach County, Florida
North County Resource Recovery Facility
Facility ID Number 0990234
Installation and start-up of an Emergency Engine Generator at Administration Building
NESHAP/NSPS Applicability, "After-the-Fact" Initial Notification

Dear Mr. Sheplak:

The Solid Waste Authority (SWA) of Palm Beach County operates a 2,000-ton-per-day municipal waste combustor plant, Class I and Class III landfills, and other solid waste management facilities at the North County Resource Recovery Facility (NCRRF) located at 7501 North Jog Road, West Palm Beach, Florida. These facilities currently operate under Title V Air Operation Permit No. 0990234-016-AV.

SWA has installed emergency engine generators to serve the needs of the various facilities at the NCRRF. Due to the promulgation of a new regulation (National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ, a.k.a. "RICE MACT Rule," January 18, 2008), some of these engine generators have new applicable air regulatory requirements. For this reason, the SWA conducted a comprehensive review of air permitting and other applicable air regulatory requirements for all 86 of its stationary engines at our NCRRF site. We plan to work with you during the Title V Air Operation Permit renewal application process (due before November 19, 2010) to categorize and group these engines into emissions units based on similar unit-specific applicable requirements. As part of this review, however, we determined that our emergency engine generator at the Administration Building was required to file an Initial Notification under the RICE MACT Rule. This letter is intended to provide this Notification after the fact.

In May 2006, the SWA purchased a Stationary Reciprocating Internal Combustion Engine (RICE) that has a site rating of greater than 500 brake horse power (bhp) and operates

exclusively as an Emergency Stationary RICE at the Administration Building at the NCRRF. SWA completed its installation and commissioned this engine on January 11, 2009.

The NCRRF Site is a major source of hazardous air pollutants (HAPs), so the Administration Building Emergency Generator is subject to 40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. It is also subject to 40 CFR Part 60 Subpart IIII – Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).

The Administration Building Emergency Engine Generator is a Caterpillar Model 3412 Diesel Engine Generator Set. It has an emergency standby power output rating of 913 brake horsepower (bhp) (equivalent to 681 kilowatts (kW)), and rated standby electricity output of 600 kW. 40 CFR Subpart ZZZZ categorizes this engine generator as a New Stationary RICE Subject to Limited Requirements. (40 CFR 63 Subparts 63.6590(a)(2)(i) and (b)(1)(i)) The limited requirements are:

- Provide an Initial Notification in accordance with Subsection 63.6645(f) (40 CFR 63.6590(b)(1)); and

- Meet the definition of an Emergency Stationary RICE in Subsection 63.6675 by limiting operation of the engine generator set to up to 100 hours per year for maintenance checks and readiness testing, and for additional unlimited time for emergencies only, as specified in 40 CFR 60.4243(d).

40 CFR 60 Subpart IIII requires that the Administration Building Emergency Generator:

- Be certified to the emission standards for new non-road CI engines for the same model year and maximum engine power in 40 CFR 60.4205 (a) Table I for Pre-2007 model year engines with a displacement of <10 Liters per cylinder. For this engine, certification to following emissions is required to comply with 40 CFR 60 Subpart IIII:

Pollutant	Emission Standards	
	g/KW-hr	g/HP-hr
HC	1.3	1.0
NOx	9.2	6.9
CO	11.4	8.5
PM	0.54	0.40

- Use diesel fuel that meets the requirements of 40 CFR 80.510(a), including sulfur content less than or equal to 0.05% by weight (40 CFR 60.4207);
- Be operated and maintained in accordance with manufacturer's written instructions; (40 CFR 60.4211) and
- Have a non-resettable hour meter installed prior to engine startup to track compliance with the hours restriction in 40 CFR 60.4243(d), cited above. (40 CFR 60.4209)

No Initial Notification is required for emergency engines under 40 CFR 60 Subpart IIII. (40 CFR 60.4214(b))

The engine specifications, attached, show that **the Administration Building Emergency Generator is a U.S.-EPA-certified Tier I engine (40 CFR 89), and is in compliance with the emission standards of 40 CFR Part 60 Subpart IIII for CI engines.**

In accordance with 40 CFR 63.6645(f), this letter serves as the **Initial Notification** to Florida Department of Environmental Protection (FDEP). The following information is provided to fulfill the requirements of the Initial Notification in 40 CFR 63 Subpart ZZZZ, as specified in 40 CFR 63.9(b)(2)(i) thru (v) and 40 CFR 63.6645(f).

(i) The name and address of the owner or operator:

Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, FL 33412

(ii) The address (i.e., physical location) of the affected source:

Administration Building (same address as above)

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date:

This notification is required by 40 CFR 63 Subpart ZZZZ, Subsection 63.6590(b)(1). The compliances dates are:

- Requirements other than Initial Notification are applicable at start-up of the Emergency Stationary RICE;
- Initial Notification is required within 120 days of start-up (40 CFR 63.9(b)(2)).

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted:

The affected source is the North County Regional Resource Recovery Facility (NCRRF) Site, containing a 2,000-ton-per-day municipal waste combustor plant, Class I and Class III landfills, and other solid waste management facilities, as described in Title V Air Operation Permit No. 0990234-016-AV. The emission point subject to 40 CFR 63 Subpart ZZZZ is an Emergency Stationary RICE, Caterpillar Model 3412 , Nonroad 2 diesel fueled engine. The hazardous air pollutants emitted from internal combustion engines include PAHs, acetaldehyde, arsenic, benzene, beryllium compounds and formaldehyde; U.S. EPA has established emissions limits for the surrogates of carbon monoxide and hydrocarbons. (73 FR 13, January 18, 2008)

(v) A statement of whether the affected source is a major source or an area source:

The NCRRF Site's municipal waste combustor plant is a major source of hydrogen chloride (HCl) emissions.

(f) A statement that your stationary RICE has no additional requirements under 40 CFR 63 Subpart ZZZZ, and the basis:

The Administration Building Emergency Generator is subject only to the Initial Notification and hours restrictions requirements of this Rule, because it will operate exclusively as an emergency stationary RICE, has a site rating of more than 500 brake horsepower, and is located at a major source of HAP emissions. (40 CFR 63 Subparts 63.6590(a)(2)(i) and (b)(1)(i)) Although there are no additional requirements under

this NESHAP, the Admin Emergency Generator is also subject to requirements under 40 CFR 60 Subpart IIII.

Owner/Responsible Official Certification

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, FAC. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made are true, accurate and complete.

Mark M — 9/15/10

Mr. Mark Hammond
Executive Director
Solid Waste Authority

Date

Should you have any comments or questions, please feel free to call me, or you may direct your questions to our consulting engineer, Camp Dresser & McKee, Inc. Attention: Cynthia Hibbard at 617-452-6000.

Very truly yours,

Mark M

Mark Hammond
Executive Director

Cc: M. Morrison, SWA
Joseph Kahn, FDEP
Lennon Anderson, FDEP/Southeast
John Holtom, FDEP
Ana Oquendo-Vazquez, Title V Permitting, EPA Region 4
C. Hibbard, CDM/CAM
M. Hernandez, CDM/WPB

EMISSIONS DATA [BPG00204] ***SEPTEMBER 29, 2009***

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Engine Emissions Data

For Emissions feedback and questions contact: engine_certification@cat.com

This link is case sensitive.

Emissions Definitions

This emission data is Caterpillar's best estimate for this rating. If actual emissions are required then an emission test needs to be run on your engine.

Serial Number (Machine)	
Serial Number (Engine)	**BPG00204**
Sales Model	3412
Build Date	2001-01-11
Interlock Code Progression	No Interlock Code Progression
As Shipped Data	
Engine Arrangement Number	1870557
Certification Arrangement	
Test Spec Number	0K2245
Certification	EPA / CARB / EU
Labeled Model Year	2001
Family Code	1CPXL27.0MRH
Family Certification	EPA Tier 1
Family Certification	EU Stage I
Family Certification	
Flash File	No Flash File Found
Flash File Progression	No Flash File Found
CORR FL Power at RPM	913 HP (681.0 KW) at 1800 rpms
Advertised Power	896hp 1,800RPM
Liters	

This is not an official emission certificate. This is for emission data information only.

SYSTEMS DATA [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Reference Number: DM6211 **Version Symbol:** **Change Level:**

Sales Model: 3412C DI TA JW **Eff. Serial Number Prefix:** BAX **Engr. Model:** E610

Description	Answer	Unit
Air Intake System		
The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.		
MAX ALLOW INTAKE RESTR W/CLEAN ELEMENT	14.9	IN WTR
MAX ALLOW INTAKE RESTR W/DIRTY ELEMENT	24.9	IN WTR
MAX ALLOW INTAKE MANIFOLD TEMP	185	DEG F
ALLOW PRESS DROP-COMPR OUT TO MANF IN	4.0	IN HG
MAX TURBO INLET AIR TEMPERATURE	97	DEG F
Cooling System		
ENGINE ONLY COOLANT CAPACITY	15.6	GAL
MAX ALLOW ENGINE COOLANT OUTLET TEMP	210	DEG F
REGULATOR START-TO-OPEN TEMP	190	DEG F
REGULATOR FULL OPENING TEMPERATURE	208	DEG F
REGULATOR LOCATION	OUTLET	
AMBIENT COOLING CAPABILITY AT RATED SPD	126	DEG F
MIN RECOMMENDED SYS PRESS CAP PRESSURE	7.0	PSI
MAX UNINTERRUPTED FILL RATE	5	GPM
MIN ALLOW COOLANT LOSS-PERCT OF TOTAL	0	PERCENT
COOL LOSS-MAX % OF PUMP PRESS RISE LOSS	0	PERCENT
MIN ALLOW PUMP CAVITATION TEMPERATURE	201	DEG F
Engine Spec System		
CYLINDER ARRANGEMENT	VEE	
NUMBER OF CYLINDERS	12	CYL
CYLINDER BORE DIAMETER	5.4016	IN
PISTON STROKE	6.0000	IN
TOTAL CYLINDER DISPLACEMENT	1,649	CU IN
COMPRESSION RATIO (TO ONE)	14.5	
CRANKSHAFT ROTATION (FROM FLYWHEEL END)	CCW	
CYLINDER FIRING ORDER	1-4-9	
CYLINDER FIRING ORDER - CONTINUED	8-5-2	
CYLINDER FIRING ORDER - CONTINUED	11-10-3	
CYLINDER FIRING ORDER - CONTINUED	6-7-12	
NUMBER 1 CYLINDER LOCATION	FRONT-RT	
STROKES/COMBUSTION CYCLE	4	STROKES
APPLICATION CLASS	GEN	
ENGINE DUTY CYCLE	STDB	
FACTORY TEST SPEC	0K2246	
EMISSION CERTIFICATION AGENCIES	EPA	
EMISSION CERTIFICATION YEAR	2000	

GENSET LINE FREQUENCY	60	HZ
GENSET VOLTAGE RANGE	440-480	
GENERATOR FRAME SIZE	593	
Exhaust System		
The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.		
MAX ALLOWABLE SYSTEM BACK PRESSURE	26.9	IN WTR
MANIFOLD TYPE	DRY	
MAX ALLOW STATIC WT ON EXHAUST CONN	51	LB
Fuel System		
MAX FUEL FLOW TO TRANSFER PUMP (TO ENG)	51.0	GPH
MAX ALLOW FUEL SUPPLY LINE RESTRICTION	8.9	IN HG
MAX ALLOW FUEL RETURN LINE RESTR	8.0	IN HG
NORMAL FUEL PRESSURE-CLEAN SYSTEM	30.0	PSI
FUEL SYSTEM TYPE	P & L	
MAXIMUM FUEL PRESSURE TO ENGINE	FUL-FL,S-O : INVALID DATA	PSI
Lube System		
RECOMMENDED OIL TYPE (API OR CAT SPEC)	CH-4	
OIL FILTER TYPE	FUL-FL,S-O	
LUBE SYSTEM OIL COOLER TYPE	SHL & TUBE	
MAXIMUM ALLOWABLE OIL TEMP	235	DEG F
NOM OIL PRESS W/SAE 10W30 OIL @ 99 DEG C	65.3	PSI
MIN LI OP W/SAE 10W30 OIL @ 99 DEG C	20.0	PSI
CRANKCASE VENTILATION TYPE	TO ATM	
CENTER SUMP STD/OPT/NAP	STD	
CENTER SUMP REFILL VOL W/FILTER CHANGE	63	QT
REAR SUMP STD/OPT/NAP	NAP	
FRONT DEEP SUMP STD/OPT/NAP	NAP	
CENTER DEEP SUMP STD/OPT/NAP	NAP	
REAR DEEP SUMP STD/OPT/NAP	NAP	
Mounting System		
STD - FLYWHEEL HOUSING SIZE-SAE NUMBER	#0	
MAX STAT BEND MOMT / RR FACE FLYWHL HSNG	12,002	LB IN
DRY WT ENG ONLY (DRAINED OF FLUIDS)	4,248	LB
ENGINE LENGTH	76.2597	IN
ENGINE WIDTH	49.8424	IN
Starting System		
MIN CRANKING SPD REQUIRED FOR START-RPM	100	RPM
LOWEST AMBIENT START TEMP W/O AIDS	90	DEG F
REC BAT CAP 24V 10W30 ABOVE 0 DEG C	870	CCA

Data Privacy Statement.

GENERATOR DETAIL [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Spec Information

Generator Specification

Frame: 593 **Type:** SR4B	**No. of Bearings:** 1
Winding Type: RANDOM WOUND	**Flywheel:** 18.0
Connection: SERIES STAR	**Housing:** 0
Phases: 3	**No. of Leads:** 12
Poles: 4	**Wires per Lead:** 2
Sync Speed: 1800	**Generator Pitch:** 0.7333

Generator Efficiency

Per Unit Load	kW	Efficiency %
0.25	150.0	91.9
0.5	300.0	94.5
0.75	450.0	94.9
1.0	600.0	94.7

Reactances	Per Unit	Ohms
SUBTRANSIENT - DIRECT AXIS X''_d	0.1413	0.0434
SUBTRANSIENT - QUADRATURE AXIS X''_q	0.1406	0.0432
TRANSIENT - SATURATED X'_d	0.2080	0.0639
SYNCHRONOUS - DIRECT AXIS X_d	2.8682	0.8811
SYNCHRONOUS - QUADRATURE AXIS X_q	1.4554	0.4471
NEGATIVE SEQUENCE X_2	0.1410	0.0433
ZERO SEQUENCE X_0	0.0391	0.0120

Time Constants	Seconds
OPEN CIRCUIT TRANSIENT - DIRECT AXIS T'_{d0}	2.8260
SHORT CIRCUIT TRANSIENT - DIRECT AXIS T'_d	0.2051
OPEN CIRCUIT SUBSTRANSIENT - DIRECT AXIS T''_{d0}	0.0090
SHORT CIRCUIT SUBSTRANSIENT - DIRECT AXIS T''_d	0.0065
OPEN CIRCUIT SUBSTRANSIENT - QUADRATURE AXIS T''_{q0}	0.0078
SHORT CIRCUIT SUBSTRANSIENT - QUADRATURE AXIS T''_q	0.0059
EXCITER TIME CONSTANT T_e	0.1400
ARMATURE SHORT CIRCUIT T_a	0.0239

Short Circuit Ratio: 0.5	Stator Resistance = 0.0096 Ohms	Field Resistance = 1.56 Ohms

Voltage Regulation

Voltage level adustment: +/-	5.0%
Voltage regulation, steady state: +/-	0.5%
Voltage regulation with 3% speed change: +/-	0.5%
Waveform deviation line - line, no load: less than	5.0%
Telephone influence factor: less than	50

Generator Excitation

	No Load	Full Load, (rated) pf	
		Series	Parallel
Excitation voltage:	8.97 Volts	40.06 Volts	Volts
Excitation current	1.99 Amps	7.31 Amps	Amps

Selected Model

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Generator Mechanical Information

Center of Gravity

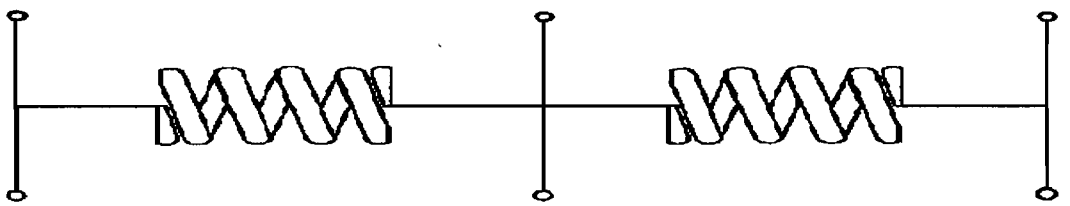
Dimension X	-703.1 mm	-27.7 IN.
Dimension Y	0.0 mm	0.0 IN.
Dimension Z	0.0 mm	0.0 IN.

- "X" is measured from driven end of generator and parallel to rotor. Towards engine fan is positive. See General Information for details
- "Y" is measured vertically from rotor center line. Up is positive.
- "Z" is measured to left and right of rotor center line. To the right is positive.

Generator WT = 1671 kg * Rotor WT = 606 kg * Stator WT = 1065 kg
3,684 LB 1,336 LB 2,348 LB

Rotor Balance = 0.0508 mm deflection PTP
Overspeed Capacity = 150% of synchronous speed

Generator Torsional Data



J1 = Coupling and Fan | **J2 = Rotor** | **J3 = Exciter End**

TOTAL J = J1 + J2 + J3

K1 = Shaft Stiffness between J1 + J2 (Diameter 1)

K2 = Shaft Stiffness between J2 + J3 (Diameter 2)

J1	K1	Min Shaft Dia 1	J2	K2	Min Shaft Dia 2	J3
11.8 LB IN. s^2	75.2 MLB IN./rad	5.0 IN.	73.5 LB IN. s^2	9.7 MLB IN./rad	2.5 IN.	1.5 LB IN. s^2
1.336 N m s^2	8.5 MN m/rad	127.0 mm	8.31 N m s^2	1.1 MN m/rad	63.5 mm	0.171 N m s^2

Total J

86.9 LB IN. s^2

9.817 N m s^2

Selected Model

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Generator Cooling Requirements - Temperature - Insulation Data

Cooling Requirements:		**Temperature Data: (Ambient 40 ^{0}C)**	
Heat Dissipated:	33.6 kW	**Stator Rise:**	130.0 ^{0}C
Air Flow:	112.2 m^3/min	**Rotor Rise:**	130.0 ^{0}C

Insulation Class: H

Insulation Reg. as shipped: 100.0 MΩ minimum at 40 ^{0}C

Thermal Limits of Generator

Frequency:	60 Hz
Line to Line Voltage:	480 Volts
B BR 80/40	565.0 kVA
F BR -105/40	681.0 kVA
H BR - 125/40	750.0 kVA
F PR - 130/40	750.0 kVA

Selected Model

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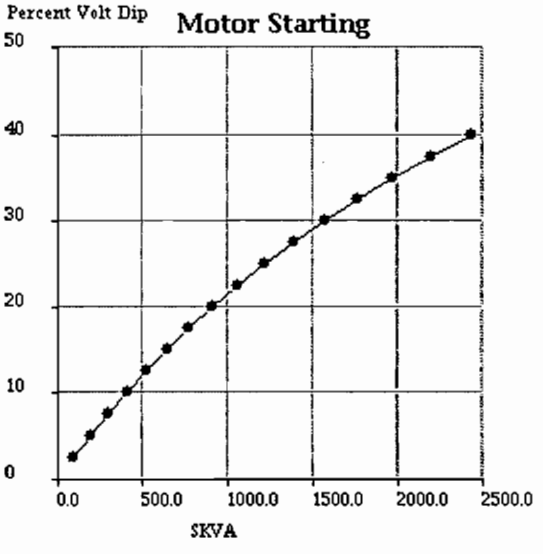
Starting Capability & Current Decrement

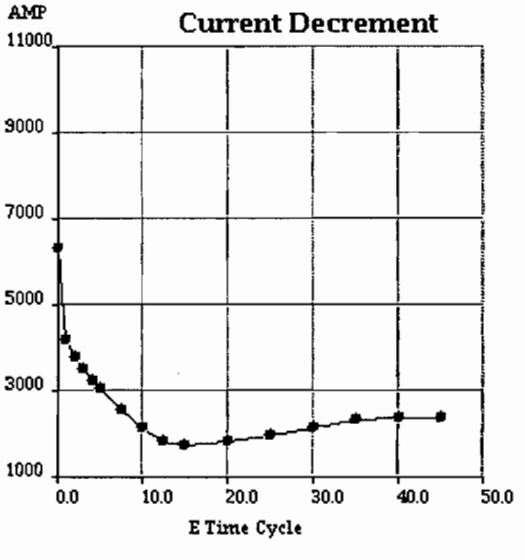
Motor Starting Capability (0.4 pf)

SKVA	Percent Volt Dip
94	2.5
192	5.0
296	7.5
406	10.0
522	12.5
645	15.0
775	17.5
914	20.0
1,061	22.5
1,218	25.0
1,386	27.5
1,566	30.0
1,759	32.5
1,968	35.0
2,193	37.5
2,436	40.0



Current Decrement Data

E Time Cycle	AMP
0.0	6,335
1.0	4,186
2.0	3,758
3.0	3,487
4.0	3,246
5.0	3,025
7.5	2,545
10.0	2,153
12.5	1,837
15.0	1,743
20.0	1,812
25.0	1,970
30.0	2,157
35.0	2,300
40.0	2,344
45.0	2,353



Instantaneous 3 Phase Fault Current: 6335 Amps **Instantaneous Line - Line Fault Current:** 5491 Amps

Instantaneous Line - Neutral Fault Current: 8352 Amps

Selected Model

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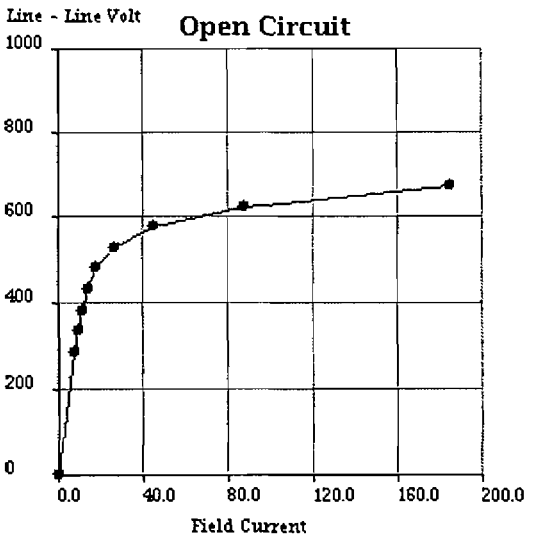
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Generator Output Characteristic Curves

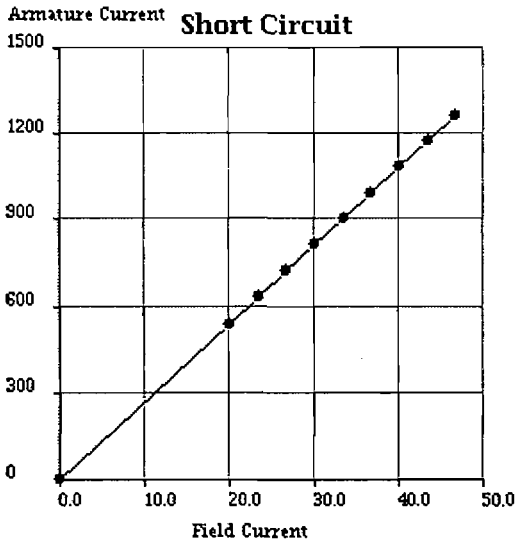
Open Circuit Curve

Field Current	Line - Line Volt
0.0	0
7.5	288
8.9	336
10.7	384
13.3	432
17.7	480
26.3	528
44.9	576
87.1	624
184.5	672



Short Circuit Curve

Field Current	Armature Current
0.0	0
20.0	541
23.4	631
26.7	722
30.0	812
33.4	902
36.7	992
40.1	1,083
43.4	1,173
46.7	1,263



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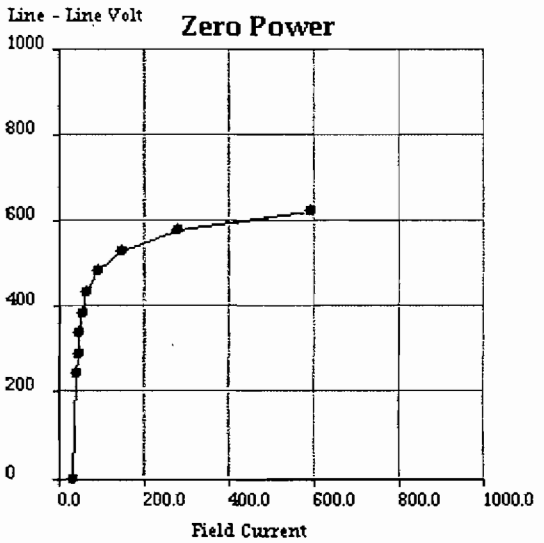
Generator Output Characteristic Curves

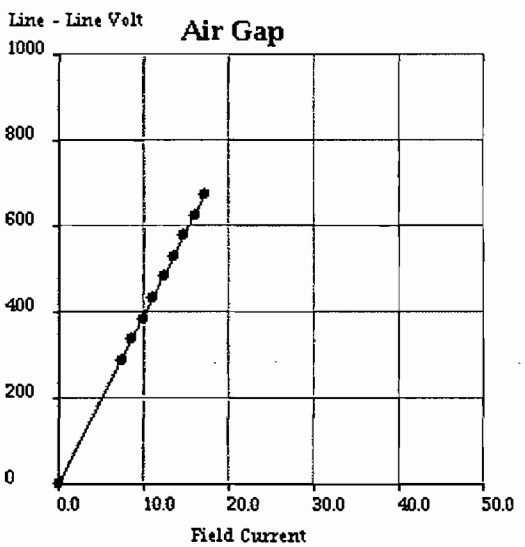
Zero Power Factor Curve

Field Current	Line - Line Volt
33.4	0
42.6	240
44.6	288
47.7	336
53.2	384
64.5	432
89.5	480
146.7	528
279.5	576
590.1	624



Air Gap Curve

Field Current	Line - Line Volt
0.0	0
7.3	288
8.5	336
9.7	384
11.0	432
12.2	480
13.4	528
14.6	576
15.8	624
17.0	672



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Reactive Capability Curve

Click to view Chart

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

General Information

DM7802
GENERATOR GENERAL INFORMATION

I. GENERATOR MOTOR STARTING CAPABILITY CURVES
A. THE MOTOR STARTING CURVES ARE REPRESENTATIVE OF THE DATA OBTAINED BY THE FOLLOWING PROCEDURE:
1. THE CATERPILLAR GENERATOR IS DRIVEN BY A SYNCHRONOUS DRIVER.
2. VARIOUS SIZE THREE PHASE INDUCTION MOTORS (NEMA CODE F) ARE STARTED ACROSS THE LINE LEADS OF THE UNLOADED GENERATOR.
3. THE RESULTING VOLTAGE DIPS ARE RECORDED WITH AN OSCILLOSCOPE.
4. MOTOR HORSEPOWER HAS BEEN CONVERTED TO STARTING KILOVOLT AMPERES (SKVA).
5. RECORDED VOLTAGE DIPS HAVE BEEN EXPRESSED AS A OF GENERATOR RATED VOLTAGE.

II. USE OF THE MOTOR STARTING CAPABILITY CURVES.
A. CALCULATE THE SKVA REQUIRED BY THE MOTOR FOR FULL VOLTAGE STARTING ACROSS THE LINE IF THE VALUE IS NOT LISTED ON THE MOTOR DATA PLATE.
1. MOTORS CONFORMING TO NEMA STANDARDS
MULTIPLY THE MOTOR HORSEPOWER BY THE NEMA SKVA/HP FIGURE. FOR NEMA CODE F,USE 5.3 SKVA/HP; FOR NEMA CODE G, USE 6.0 SKVA/HP.
2. ALL OTHER MOTORS:
MULTIPLY THE RATED VOLTAGE BY THE LOCKED ROTOR AMPERE AND BY 0.001732. (IF THE LOCKED ROTOR AMPERES ARE NOT LISTED, MULTIPLY THE FULL LOAD (RUNNING) AMPERES BY
B. USE THE ABOVE SKVA WITH THE MOTOR STARTING TABLE.
1. ACROSS LINE STARTING:
READ ACROSS THE ROW OF "ACROSS THE LINE STARTING SKVA IF THE DESIRED VALUE OF SKVA IS NOT GIVEN, CALCULATE THE DIP BY FINDING THE PROPER SKVA INTERVAL AND INTERPOLATING AS FOLLOWS:
SKVA1 IS THE SKVA TABLE ENTRY JUST SMALLER THAN THE DESIRED SKVA, DIP1 IS THE DIP FOR SKVA2, AND SKVA2 IS THE SKVA TABLE ENTRY JUST GREATER THAN THE DESIRED SKVA. THE DIP (IN PERCENT) AT THE DESIRED SKVA IS:
DIP = DIP1 + (SKVA - SKVA1) * 2.5 / (SKVA2 - SKVA1)
NOTE:VOLTAGE DIPS GREATER THAN 35% MAY CAUSE MAGNETIC CONTACTORS TO DROP OUT.

2. REDUCED VOLTAGE STARTING:
REFER TO THE FOLLOWING TABLE. MULTIPLY THE CALCULATE ACROSS LINE SKVA BY THE MULTIPLIER LISTED FOR THE SPECIFIC STARTING METHOD. APPLY THE RESULT TO THE STARTING TABLE AS IN II A, TO CALCULATE THE EXPECTED VOLTAGE DIP:

TYPE OF REDUCED VOLTAGE STARTING	MULTIPLY LINE SKVA BY
80% TAP	.80
65% TAP	.65
50% TAP	.50
45% TAP	.45
Wye start,delta run	.33
AUTOTRANSFORMER	
80% TAP	.68
65% TAP	.46
50% TAP	.29

NOTE: REDUCE VOLTAGE STARTING LOWERS THE MAXIMUM REQUIRED MOTOR skVA.

3. Part winding starting:
Most common is half-winding start, full-winding run. Multiply the full motor, accross line starting skVA by 0.6. Apply the result to the selected curve as in ii. A above. Read the expected voltage dip, for the required skVA.

III.DEFINITION:

A. GENERATOR TERMS

MODEL: Engine Sales model
ENG TYPE: DI = Direct Injection,
NA = Naturally aspirated, etc
HZ: Running frequency, hertz
RATING TYPE: PP, SB (prime power or standby)
KW: Base rating electrical kilowatts (ekW)
VOLTS: Rating terminal, line to line
GEN ARR: Cat generator arrangement part number
GEN FRAME: Generator frame size designation
CONN: Generator output connection
(star, wye, delta, ect.)
POLES: Number of pole pieces on rotor.
(eg. A 4 pole generator run at 1800)
RPM will produce 60 Hz alternating current. A 6 pole generator run at 1200 RPM will produce 60 Hz alternating current.)

B. GENERATOR TEMPERATURE RISE:
The indicated temperature rise indicated the NEMA limits for standby or prime power applications. These rises are used for calculating the losses and efficiencies and are not necessarily indicative of the actual temperature rise of a given machine.

C. CENTER OF GRAVITY
The specified center of gravity is for the generator only. For single bearing, and two bearing close coupled generators, the cent er of gravity is measured from the generator/engine flywheel housing i nterface and from the centerline of the rotor shaft.

For two bearing, standalone generators, the center of gravity is measu red from the end of the rotor shaft and from the centerline of the rot or shaft.

For two bearing, standalone generators, the center of gravity is measu red from the end of the rotor shaft and from the centerline of the rot or shaft.

D. GENERATOR DECREMENT CURRENT CURVES

The generator decrement current curve gives the symmetrical current supplied by the generator for a three phase bolted fault at the generator terminals. Generators equipped with the series boost attachment or generators with PM excitation system will supply 300% of rated current for at least 10 seconds.

E. GENERATOR EFFICIENCY CURVES
The efficiency curve is representative of the overall generator efficiency over the normal range of the electrical load and at the specified parameters. This is not the overall engine generator set efficiency curve.

GEN SET PACKAGE PERFORMANCE DATA [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Performance Number: DM6211 **Change Level:** 00

Sales Model: 3412CDITA **Combustion:** DI **Aspr:** TA

Engine Power:

600 W/F EKW 626 W/O F EKW

896 HP

Speed: 1,800 RPM **After Cooler:** JWAC

Manifold Type: DRY **Governor Type:** HYDRA **After Cooler Temp(F):** --

Turbo Quantity: 2 **Engine App:** GP **Turbo Arrangement:** Parallel

Hertz: 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

Rating Type: STANDBY **Certification:** EPA TIER-I 1996 - 2001 EU STAGE-1 1999 - 2001

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
600	100	896	238.88	0.36	46.42	195.44	55.38	1,889.34	1,237.1	971.96	5,244.23
540	90	805	214.8	0.36	41.32	191.66	47.38	1,730.42	1,179.14	938.48	4,679.2
480	80	717	191.31	0.35	36.35	188.78	40.42	1,585.63	1,122.8	905.9	4,184.79
450	75	674	179.85	0.35	33.95	187.52	37.19	1,515	1,095.44	890.06	3,958.78
420	70	631	168.25	0.35	31.65	186.26	33.91	1,444.37	1,068.44	874.76	3,736.3
360	60	546	145.62	0.35	27.26	184.1	27.78	1,310.18	1,015.34	844.34	3,308.99
300	50	462	123.28	0.35	23.14	182.3	22.15	1,183.04	962.96	814.28	2,909.93
240	40	381	101.53	0.36	19.65	180.86	17.12	1,070.04	898.7	770.54	2,532.06
180	30	297	79.19	0.38	16.09	179.6	12.5	960.56	819.5	712.04	2,161.26
150	25	255	67.88	0.39	14.29	179.06	10.34	911.12	774.32	676.94	1,984.69
120	20	212	56.42	0.41	12.44	178.52	8.44	865.21	717.44	631.94	1,811.64
60	10	124	33.21	0.49	8.66	177.62	5	791.05	581.9	522.86	1,479.69

Engine Heat Rejection Data

GEN W/F EKW	PERCENT LOAD	REJ TO JW BTU/MN	REJ TO ATMOS BTU/MN	REJ TO EXHAUST BTU/MN	EXH RCOV TO 350F BTU/MN	FROM OIL CLR BTU/MN	FROM AFT CLR BTU/MN	WORK ENERGY BTU/MN	LHV ENERGY BTU/MN	HHV ENERGY BTU/MN
600	100	22,975.4	7,734.3	37,875.3	22,008.6	3,048.2	5,152.4	37,989.1	100,034.1	106,517.3
540	90	20,473.2	6,824.4	33,325.8	18,994.5	2,843.5	3,901.3	34,178.8	89,001.4	94,802.1
480	80	18,027.8	5,630.1	29,231.1	16,321.7	2,644.4	2,849.2	30,425.4	78,253.0	83,314.4
450	75	16,890.4	5,004.5	27,297.5	15,127.4	2,536.4	2,382.9	28,605.6	73,020.9	77,798.0
420	70	15,753.0	4,492.7	25,477.7	13,990.0	2,428.3	1,950.6	26,785.7	68,073.2	72,509.1
360	60	13,591.9	3,582.8	22,065.5	11,885.8	2,217.9	1,194.3	23,146.0	58,632.9	62,443.1
300	50	11,601.5	2,786.6	18,994.5	10,009.1	2,018.9	574.4	19,620.1	49,704.3	52,945.9
240	40	9,895.4	2,900.4	15,980.4	8,132.4	1,831.2	96.7	16,151.0	42,197.4	44,984.1
180	30	8,132.4	3,014.1	13,023.2	6,255.7	1,603.7	-278.7	12,625.1	34,576.9	36,794.8

150	25	7,222.5	3,014.1	11,601.5	5,288.9	1,478.6	-432.2	10,805.3	30,652.9	32,643.3
120	20	6,312.6	3,071.0	10,122.8	4,322.1	1,359.2	-557.3	8,985.4	26,728.8	28,434.9
60	10	4,435.9	2,957.2	7,222.5	2,388.5	1,086.2	-745.0	5,288.9	18,653.3	19,847.6

EXHAUST Sound Data: 4.92 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	109	99	109	109	109	102	99	98	88
540	90	108	98	108	109	108	101	99	97	88
480	80	108	97	107	108	107	100	98	96	87
450	75	107	97	107	107	107	100	97	96	86
420	70	107	96	106	107	106	99	97	96	86
360	60	106	95	105	106	105	98	96	95	85
300	50	105	94	104	105	104	97	95	94	84
240	40	104	94	104	104	104	97	94	93	83
180	30	103	93	103	103	103	96	93	92	82
150	25	103	92	102	103	102	95	93	92	82
120	20	102	92	102	102	102	95	92	91	81
60	10	101	90	100	101	100	93	91	90	80

EXHAUST Sound Data: 22.97 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	96	89	99	94	94	88	87	87	79
540	90	95	89	98	93	93	88	87	87	79
480	80	94	88	97	92	92	87	86	86	78
450	75	94	87	97	92	92	86	85	85	77
420	70	93	87	97	92	91	86	85	85	77
360	60	93	86	96	91	90	85	84	84	76
300	50	92	85	95	90	90	84	83	83	75
240	40	91	84	94	89	89	83	82	82	74
180	30	90	83	93	88	88	82	81	81	73
150	25	89	83	92	87	87	82	81	81	73
120	20	89	82	92	87	87	81	80	80	72
60	10	88	81	91	86	85	80	79	79	71

EXHAUST Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	89	83	92	87	87	82	81	81	73
540	90	88	82	92	87	86	81	80	80	72
480	80	88	81	91	86	85	80	79	79	71
450	75	87	81	90	85	85	80	79	79	71
420	70	87	80	90	85	85	79	78	78	70
360	60	86	79	89	84	84	78	77	77	70
300	50	85	79	88	83	83	78	77	77	69
240	40	84	78	87	82	82	77	76	76	68
180	30	83	77	86	81	81	76	75	75	67
150	25	83	76	86	81	81	75	74	74	66
120	20	82	76	85	80	80	75	74	74	66
60	10	81	75	84	79	79	74	73	73	65

MECHANICAL Sound Data: 3.28 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	105	104	113	104	101	99	97	82	78
540	90	105	104	113	104	101	99	97	82	78
480	80	105	104	113	104	101	99	97	82	78
450	75	105	104	113	104	101	99	97	82	78
420	70	105	104	113	104	101	99	97	82	78
360	60	105	104	113	104	101	99	97	82	78
300	50	105	104	113	104	101	99	97	82	78
240	40	105	104	113	104	101	99	97	82	78
180	30	105	104	113	104	101	99	97	82	78
150	25	105	104	113	104	101	99	97	82	78
120	20	105	104	113	104	101	99	97	82	78
60	10	105	104	113	104	101	99	97	82	78

MECHANICAL Sound Data: 22.97 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCJ 8000HZ DB
600	100	92	92	100	92	87	86	86	79	70
540	90	92	92	100	92	87	86	86	79	70
480	80	92	92	100	92	87	86	86	79	70
450	75	92	92	100	92	87	86	86	79	70
420	70	92	92	100	92	87	86	86	79	70
360	60	92	92	100	92	87	86	86	79	70
300	50	92	92	100	92	87	86	86	79	70
240	40	92	92	100	92	87	86	86	79	70
180	30	92	92	100	92	87	86	86	79	70
150	25	92	92	100	92	87	86	86	79	70
120	20	92	92	100	92	87	86	86	79	70
60	10	92	92	100	92	87	86	86	79	70

MECHANICAL Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	86	86	94	87	82	80	79	74	63
540	90	86	86	94	87	82	80	79	74	63
480	80	86	86	94	87	82	80	79	74	63
450	75	86	86	94	87	82	80	79	74	63
420	70	86	86	94	87	82	80	79	74	63
360	60	86	86	94	87	82	80	79	74	63
300	50	86	86	94	87	82	80	79	74	63
240	40	86	86	94	87	82	80	79	74	63
180	30	86	86	94	87	82	80	79	74	63
150	25	86	86	94	87	82	80	79	74	63
120	20	86	86	94	87	82	80	79	74	63
60	10	86	86	94	87	82	80	79	74	63

EMISSIONS DATA

EPA TIER-I 1996 - 2001 ********** A4
Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr
U. S. (incl Calif)	EPA/Tier-1	CO:11.4 HC:1.3 NOx:9.2 PM:0.5

EU STAGE-1 1999 - 2001 ********** A4
Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr
U. S. (incl Calif)	EPA/Tier-1	CO:11.4 HC:1.3 NOx:9.2 PM:0.5

REFERENCE EXHAUST STACK DIAMETER	8 IN
WET EXHAUST MASS	8,624.5 LB/HR
WET EXHAUST FLOW (971.60 F STACK TEMP)	5,247.76 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,800.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,648.84 STD CFM
FUEL FLOW RATE	46 GAL/HR

RATED SPEED "Not to exceed data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT
600	100	896	12.7500	6.0500	.2500	.9000	9.4000
450	75	674	10.7400	3.9200	.1900	.4400	10.5000
300	50	462	8.3400	1.5100	.1900	.2300	11.9000
150	25	255	4.8400	1.2400	.1300	.1900	13.8000
60	10	124	2.9700	1.2900	.2200	.1500	16.0000

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT
600	100	896	10.5300	3.2400	.1300	1,055.4	.4600	9.4000
450	75	674	8.8800	2.1000	.1000	784.9	.2300	10.5000
300	50	462	6.8900	.8100	.1000	557.2	.1200	11.9000
150	25	255	4.0000	.6600	.0700	342.2	.1000	13.8000
60	10	124	2.4500	.6900	.1100	201.2	.0800	16.0000

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. / Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 F	895.8 hp	895.8 hp	895.8 hp	895.8 hp	895.8 hp	895.8 hp
984.25 F	895.8 hp	895.8 hp	895.8 hp	893.12 hp	864.96 hp	895.8 hp
1,640.42 F	895.8 hp	895.8 hp	895.8 hp	871.66 hp	844.84 hp	895.8 hp
3,280.84 F	895.8 hp	877.03 hp	847.52 hp	820.7 hp	795.22 hp	864.96 hp
4,921.26 F	854.23 hp	824.73 hp	797.91 hp	772.43 hp	748.29 hp	823.39 hp
6,561.68 F	803.27 hp	775.11 hp	749.63 hp	725.49 hp	704.04 hp	783.16 hp
8,202.1 F	754.99 hp	728.17 hp	705.38 hp	682.58 hp	661.12 hp	744.27 hp
9,842.52 F	708.06 hp	683.92 hp	661.12 hp	641.01 hp	620.89 hp	705.38 hp
11,482.94 F	665.15 hp	642.35 hp	620.89 hp	600.78 hp	582 hp	670.51 hp
13,123.36 F	623.57 hp	602.12 hp	582 hp	563.23 hp	545.8 hp	635.64 hp
14,763.78 F	583.34 hp	563.23 hp	544.45 hp	527.02 hp	510.93 hp	602.12 hp

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes

Engine Arrangement:	1859958	**Lube Oil Press @ Rated Spd(PSI):**	66.7
Effective Serial No:	BAX00001	**Piston Speed @ Rated Eng SPD (FT/Min):**	1,773.6
Primary Engine Test Spec:	0K2246	**Max Operating Altitude(FT):**	2,132.5
Performance Parm Ref:	TM5739	**PEEC Elect Control Module Ref**	
Performance Data Ref:	DM6211	**PEEC Personality Cont Mod Ref**	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		**Turbocharger Model**	TV8112-1.08
Certification Ref:	EPA TIER-I	**Fuel Injector**	
Certification Year:	1996	**Timing-Static (DEG):**	40.00
Compression Ratio:	14.5	**Timing-Static Advance (DEG):**	30.00
Combustion System:	DI	**Timing-Static (MM):**	--
Aftercooler Temperature (F):	--	**Unit Injector Timing (MM):**	--
Crankcase Blowby Rate(CFH):	--	**Torque Rise (percent)**	--
Fuel Rate (Rated RPM) No Load (Gal/HR):	--	**Peak Torque Speed RPM**	--
Lube Oil Press @ Low Idle Spd(PSI):	63.8	**Peak Torque (LB/FT):**	--

Reference Number: DM6211

THIS PERFORMANCE CURVE IS ALSO APPLICABLE TO:
TEST SPECIFICATION 0K2234
ENGINE ARRANGEMENT 185-9959
TEST SPECIFICATION 0K2239
ENGINE ARRANGEMENT 186-4817
TEST SPECIFICATION 0K2245
ENGINE ARRANGEMENT 187-0557
EPA TIER-I 19962001A4EU STAGE-1 19992001A4

Parameters Reference: TM5739

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

ENGINE POWER	+/-	3%
EXHAUST STACK TEMPERATURE	+/-	8%
GENERATOR POWER	+/-	5%
INLET AIR FLOW	+/-	5%
INTAKE MANIFOLD PRESSURE - GAGE	+/-	10%
EXHAUST FLOW	+/-	6%
SPECIFIC FUEL CONSUMPTION	+/-	3%
FUEL RATE	+/-	5%
HEAT REJECTION	+/-	5%
HEAT REJECTION EXHAUST ONLY	+/-	10%

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1349. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC

ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE STANDBY POWER RATING. TYPICAL OPERATION IS 200 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 500 HOURS PER YEAR.

PRIME POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.